

IN THE CLAIMS:

- 1-12. (Cancelled)
13. (Currently Amended) A magnetic recording system for perpendicular recording hard disk drives, comprising:
- a magnetic head for recording and reproducing information, and
 - a perpendicular magnetic recording medium having a perpendicular magnetic recording layer, and
 - a soft magnetic underlayer,
 - said perpendicular magnetic recording layer having a burst area,
 - said burst area having a first area with a burst signal recorded therein for positioning said magnetic head, and a second area with a dummy signal recorded therein, wherein said dummy signal is adapted to cancel a DC offset and further wherein
 - a bit length of said dummy signal being less than a bit length of the burst signal.
14. (Previously Presented) A magnetic recording system according to claim 13, wherein the perpendicular magnetic recording medium has a response to DC magnetization.
15. (Currently Amended) A magnetic recording system for perpendicular recording hard disk drives, comprising:
- a magnetic head for recording and reproducing information; and
 - a perpendicular magnetic recording medium having a perpendicular magnetic recording layer, and
 - a soft magnetic underlayer,
 - said perpendicular magnetic recording layer having a burst area,
 - said burst area having a first area with a burst signal recorded therein for positioning said magnetic head, and a second area with a dummy signal recorded therein, wherein said dummy signal is adapted to cancel a DC offset and further wherein

said burst area is formed with a bit length of said dummy signal less than a bit length of the burst signal, such that the burst signal is extractable from said burst area.

16. (Previously Presented) A magnetic recording system according to claim 15, further comprising: a controller which extracts the burst signal element from said burst area.
17. (Previously Presented) A magnetic recording system according to claim 15, wherein the perpendicular magnetic recording medium has a response to DC magnetization.
18. (Previously Presented) A magnetic recording system according to claim 13, wherein said perpendicular magnetic recording layer further has a user data area with a user data signal recorded therein, and a bit length of the burst signal is less than or equal to a bit length of the user data signal.
19. (Previously Presented) A magnetic recording system according to claim 14, wherein said perpendicular magnetic recording layer further has a user data area with a user data signal recorded therein, and a bit length of the burst signal is less than or equal to a bit length of the user data signal.
20. (Previously Presented) A magnetic recording system according to claim 18, wherein a maximum bit length of the burst signal is less than or equal to a maximum bit length of the user data signal.
21. (Previously Presented) A magnetic recording system according to claim 19, wherein a maximum bit length of the burst signal is less than or equal to a maximum bit length of the user data signal.
22. (Currently Amended) A magnetic recording system for perpendicular recording hard disk drives, comprising:
 - a magnetic head for recording and reproducing information, and

a perpendicular magnetic recording medium having a perpendicular magnetic recording layer, and

a soft magnetic underlayer,

said perpendicular magnetic recording layer having a burst area,

said burst area having a first area with a burst signal recorded therein for positioning said magnetic head, and a second area with a dummy signal recorded therein, wherein said dummy signal is adapted to cancel a DC offset and further wherein

a frequency of said dummy signal is higher than a frequency of the burst signal.

23. (Previously Presented) A magnetic recording system according to claim 22, wherein the perpendicular magnetic recording medium has a response to DC magnetization.

24. (Currently Amended) A magnetic recording system for perpendicular recording hard disk drives, comprising:

a magnetic head for recording and reproducing information, and

a perpendicular magnetic recording medium having a perpendicular magnetic recording layer, and

a soft magnetic underlayer,

said perpendicular magnetic recording layer having a burst area,

said burst area having a first area with a burst signal recorded therein for positioning said magnetic head, and a second area with a dummy signal recorded therein, wherein said dummy signal is adapted to cancel a DC offset and further wherein

said burst area is formed with a frequency of said dummy signal higher than a frequency of the burst signal, such that the burst signal is extractable from said burst area.

25. (Previously Presented) A magnetic recording system according to claim 24, wherein the perpendicular magnetic recording medium has a response to DC magnetization.

26. (Previously Presented) A magnetic recording system according to claim 24, further comprising: a controller which extracts the burst signal element from said burst area.
27. (Currently Amended) A magnetic recording system for perpendicular recording hard disk drives, comprising:
- a magnetic head for recording and reproducing information, and
 - a perpendicular magnetic recording medium having a perpendicular magnetic recording layer, and
 - a soft magnetic underlayer,
 - said perpendicular magnetic recording layer having a burst area,
 - said burst area having a first area with a burst signal recorded therein for positioning said magnetic head, and a second area with a dummy signal recorded therein, wherein said dummy signal is adapted to cancel a DC offset and further
 - wherein
 - a recording density of said dummy signal is higher than a recording density of the burst signal.
28. (Previously Presented) A magnetic recording system according to claim 27, wherein the perpendicular magnetic recording medium has a response to DC magnetization.
29. (Currently Amended) A magnetic recording system for perpendicular recording hard disk drives, comprising:
- a magnetic head for recording and reproducing information; and
 - a perpendicular magnetic recording medium having a perpendicular magnetic recording layer, and
 - a soft magnetic underlayer,
 - said perpendicular magnetic recording layer having a burst area,
 - said burst area having a first area with a burst signal recorded therein for positioning said magnetic head, and a second area with a dummy signal recorded therein, wherein said dummy signal is adapted to cancel a DC offset and further
 - wherein
 - said burst area is formed with a recording density of said dummy signal

lesshigher than a recording density of the burst signal, such that the burst signal is extractable from said burst area.

30. (Previously Presented) A magnetic recording system according to claim 29, wherein the perpendicular magnetic recording medium has a response to DC magnetization.
31. (Previously Presented) A magnetic recording system according to claim 29, further comprising: a controller which extracts the burst signal element from said burst area.
32. (New) A magnetic recording system according to claim 13, wherein the bit length of said burst signal is twice the bit length of said dummy signal.
33. (New) A magnetic recording system according to claim 13, wherein the bit length of said burst signal is an integer multiple of the bit length of the dummy signal.
34. (New) A magnetic recording system according to claim 15, wherein the bit length of said burst signal is twice the bit length of said dummy signal.
35. (New) A magnetic recording system according to claim 15, wherein the bit length of said burst signal is an integer multiple of the bit length of the dummy signal.
36. (New) A magnetic recording system according to claim 22, wherein the frequency of said dummy signal is twice as high as the frequency of the burst signal.
37. (New) A magnetic recording system according to claim 22, wherein the frequency of said dummy signal is an integer multiple of the frequency of the burst signal.